

Cheilanthes feei T. Moore

Fee's lip-fern

Polypodiaceae (Common Fern Family)

Status: State Threatened

Rank: G5S1

General Description: Adapted from Hitchcock et al. (1969): The rhizome of this perennial fern is short and much branched, forming a multi-headed persistent base. The petioles are dark purplish-brown, 1 1/8 to 9 inches (3-23 cm) long, bearing a few brown scales at the base, but otherwise sparsely to moderately pubescent with long, loosely spreading (or seldom appressed), tawny hairs. The leaf blades are mostly 1 1/8 to 5 1/8 inches (3-13 cm) long and 1/2 to 1 1/2 inches (1.5-4 cm) wide and divided into 6-12 pairs of opposite or offset leaflets. Each leaflet is then divided again. The lower surface of the blade is covered with dense woolly hairs, which are tawny or rusty in color, and the upper surface is green and sparsely hairy. The final division of leaflets are broadly rounded, small, and commonly 1/32 to 1/16 inches (1-1.5 mm) long. The margins of the leaflets are loosely inrolled but do not cover the sporangia, which are spread over the whole lower surface.

Identification Tips: In Washington, *Cheilanthes feei* might be confused with *C. gracillima*. However there are a few distinguishing characteristics. Although both species are hairy on the underside of the leaflets, petioles and leaflet stems, *C. gracillima* also has scales on the underside of the leaflets, petioles and leaflet stems, while those structures of *C. feei* lack any scales. A technical key is needed for identification.

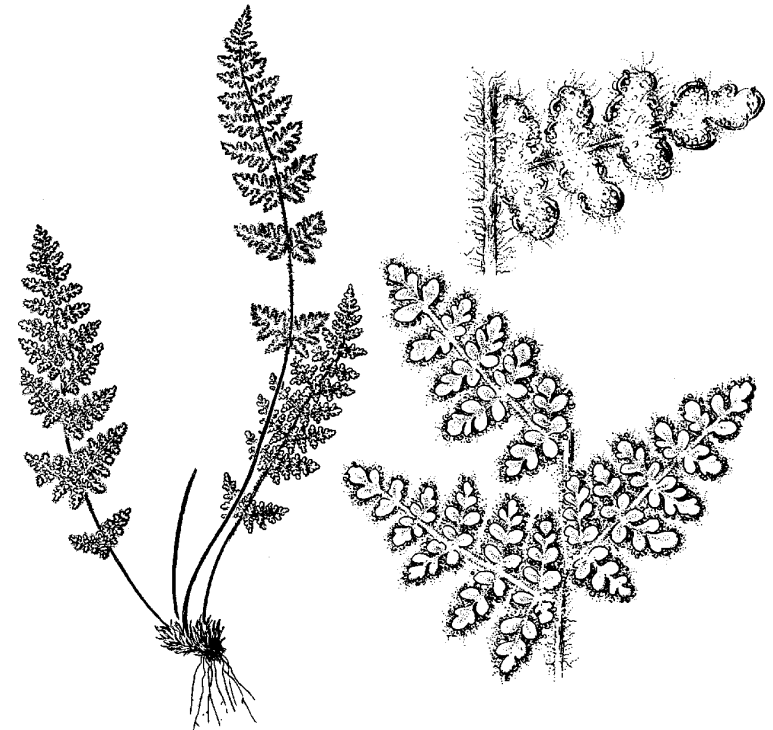
Phenology: This species is identifiable throughout the year. The leaves are evergreen but shrivel up when dry. The fern sporulates from late spring into the fall.

Range: This species has a widespread range from British Columbia and Alberta, south to Texas and adjacent Mexico, north to Wisconsin and East in Kentucky and Virginia. In Washington, it occurs in Whitman and Asotin counties.

Habitat: This species occurs on limestone cliff crevices, outcrops and steep slopes, from 850 to 2,650 feet (259 to 808 meters) elevation. Associated species at one or more sites include ditrichum moss (*Ditrichum flexicaule*), candle snuffer moss (*Encalypta vulgaris*), Vaucher's hypnum moss (*Hypnum vaucheri*), Leiberg's bluegrass (*Poa leibergii*), Wallace spikemoss (*Selaginella wallacei*), stonecrop (*Sedum*

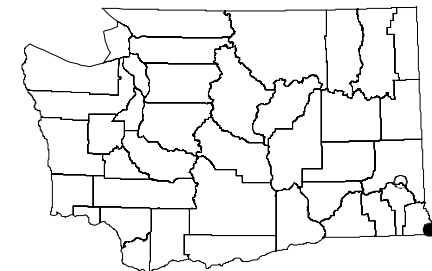
Cheilanthes feei

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Known distribution
of *Cheilanthes feei*
in Washington



- Current (1980+)
- Historic (older than 1980)

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leibergii), spiny greasebush (*Glossopetalon spinescens*), Riggins' penstemon (*Penstemon triphyllus*), western white clematis (*Clematis ligusticifolia*), and thymeleaf sandwort (*Arenaria serphyllifolia*).

Ecology: This xeromorphic fern grows almost exclusively in rocky areas. In Washington this species has been observed on cliff crevices, especially limestone, from foothills to high mountains.

State Status Comments: There are two very recent occurrences of the species in Washington.

Inventory Needs: Two known historical occurrences in Whitman County need to be relocated, if possible, and additional inventory in appropriate habitats is necessary.

Threats and Management Concerns: Threats include mining as well as dam construction, which may have flooded some habitat. Rock climbers may also pose a threat to the taxon's habitat, and non-native plant species might displace the population over time.

Comments: Although Hitchcock *et al.* places *Cheilanthes feei* within the Polypodiaceae family, other authors including The Flora of North America Editorial Committee, fragmented the Polypodiaceae into smaller families, placing the genus *Cheilanthes* within the family Pteridaceae (Maidenhair fern family).

References:

Flora of North America Editorial Committee, eds. *Flora of North America, North of Mexico: Volume two, Pteridophytes and Gymnosperms*. 1993. New York and Oxford. Oxford University Press.

Hitchcock, C.L., A. Cronquist, M. Ownbey, J.W. Thompson. 1969. *Vascular Plants of the Pacific Northwest Part 1: Vascular Cryptogams, Gymnosperms, and Monocotyledons*. University of Washington Press, Seattle, WA. 914 pp.